

CLAIMS

1. A grinder for grinding materials, the grinder comprising:
a grinder housing;
a grinding burr assembly retained in the housing;
the grinding burr assembly having a pair of grinding burrs for grinding material therebetween; and
a burr adjuster operatively coupled to the grinding burr assembly for controllably adjusting at least one of the grinding burrs.
2. The grinder for grinding materials as in claim 1, wherein the grinding burr assembly includes:
a first burr having a first grinding surface;
a second burr having a second grinding surface retained generally in opposition to first grinding surface of the first burr; and
the burr adjuster coupled to one of the first burr and second burr for controllably adjusting a space between the first grinding surface and the second grinding surface.
3. The grinder for grinding materials as in claim 2, wherein the grinding burr assembly includes:
a grinder drive;
the first burr is a rotatable burr coupled to the grinder drive;
the second burr is a generally non-rotatable burr retained in the grinder housing; and
the burr adjuster coupled to one of the rotatable burr and the non-rotatable burr for controllably adjusting the space between the rotatable burr and non-rotatable burr.
4. The grinder for grinding materials as in claim 3, wherein:
the non-rotatable burr is adjustably retained in the housing; and
the burr adjuster is controllably coupled to the non-rotatable burr for controllably moving the non-rotatable burr relative to the rotating burr.

5. The grinder for grinding material as in claim 4, wherein:
 - the non-rotatable burr includes gear teeth on an exterior surface;
 - the burr adjuster includes a controllable gear drive engaged with gear teeth on the non-rotatable burr; and
 - the controllable gear drive controllably moving the non-rotatable burr.
6. The grinder for grinding material as in claim 3 wherein the burr adjuster includes:
 - a controllable burr adjustment drive;
 - an adjuster body contacting one of the rotatable and non-rotatable burr; and
 - the burr adjustment drive controllably moving the adjuster body for moving the rotatable or non-rotatable burr contacting the adjuster body.
7. The grinder for grinding material as in claim 6, wherein the adjuster body is threadedly engaged with the housing, the controllable burr adjustment drive is engaged with the adjuster body, the burr adjuster drive is a rotating drive for controllably rotating the adjuster body to controllably adjust a space between the rotatable burr and non-rotatable burr.
8. The grinder for grinding material as in claim 7, further comprising a biasing device retained in the grinder housing abutting one of the rotatable burr and non-rotatable burr in opposition to the adjuster to provide a biasing force on the grinding burrs.
9. A method of adjusting a grinder including the steps of:
 - providing a grinder housing;
 - providing a grinding burr assembly retained in the housing;
 - the grinding burr assembly having a pair of grinding burrs for grinding material therebetween;
 - providing a controllable burr adjuster operatively coupled to the grinding burr assembly for controllably adjusting at least one of the grinding burrs;
 - positioning the grinding burrs in relation to one another to define a predetermined space between the first and second burrs; and
 - maintaining the space using the burr adjuster.

10. The method of adjusting a grinder as in claim 9, including the steps of:
providing gear teeth on an exterior surface of the non-rotatable burr;
providing the burr adjuster with a controllable gear drive engaged with gear teeth on the non-rotatable burr; and
the controllable gear drive controllably moving the non-rotatable burr.
11. The method of adjusting a grinder as in claim 9, including the steps of:
providing a controllable burr adjustment drive;
providing an adjuster body contacting one of the rotatable and non-rotatable burr; and
the burr adjustment drive controllably moving the adjuster body for moving the rotatable or non-rotatable burr contacting the adjuster body.
12. The method of adjusting a grinder as in claim 9, including the steps of:
monitoring space between burrs; and
operating the adjuster to controllably adjust the space between the burrs.
13. A coffee grinder for grinding coffee beans, the coffee grinder comprising:
a grinder housing;
a grinding assembly retained in the housing;
the grinding assembly having a bean grinding assembly for grinding coffee beans into particles of a generally predetermined size range;
the bean grinding assembly having at least one grinding surface for grinding coffee beans;
a gap being defined between the grinding surface and an opposing structure between which coffee beans are ground;
an adjuster operatively coupled to the bean grinding assembly for controllably adjusting a dimension of the gap.
14. The coffee grinding as in claim 13, the bean grinding assembly further comprising:
a first burr having a first grinding surface;
a second burr having a second grinding surface retained generally in opposition to first grinding surface of the first burr; and

the burr adjuster coupled to at least one of the first burr and second burr for controllably adjusting the gap between the first grinding surface and the second grinding surface.

15. The coffee grinder as in claim 14, the bean grinding assembly further comprising:

a grinder drive;

the first burr is a rotatable burr coupled to the grinder drive;

the second burr is a generally non-rotatable burr retained in the grinder housing; and

the adjuster is coupled to one of the rotatable burr and the non-rotatable burr for controllably adjusting the gap between the rotatable burr and non-rotatable burr.

16. The coffee grinder as in claim 15, further comprising:

the non-rotatable burr being adjustably retained in the housing; and

the adjuster is controllably coupled to the non-rotatable burr for controllably moving the non-rotatable burr relative to the rotating burr.

17. The coffee grinder as in claim 16, further comprising:

gear teeth on an exterior surface of the non-rotatable burr;

a controllable gear drive of the non-rotatable burr engaged with gear teeth on the non-rotatable burr; and

the controllable gear drive controllably moving the non-rotatable burr.

18. The coffee grinder as in claim 15, the adjuster comprising:

a controllable adjustment drive;

an adjuster body coupled to one of the rotatable and non-rotatable burrs;

and

the adjustment drive controllably moving the adjuster body for controllably moving the associated burr.

19. The coffee grinder as in claim 18, the adjuster body being threadedly engaged with a portion of the housing, the controllable burr adjustment drive is engaged with the adjuster body, the burr adjuster drive is a rotating drive for controllably rotating

the adjuster body to controllably adjust a space between the rotatable burr and non-rotatable burr.

20. The coffee grinder as in claim 19, further comprising a biasing device retained proximate to the bean grinding assembly abutting one of the rotatable burr and non-rotatable burr in opposition to the adjuster to provide a biasing force on the grinding burrs.

21. A method for adjusting a coffee grinder including the steps of:
providing a bean grinding assembly;
providing at least one grinding surface for grinding coffee beans;
providing a structure generally opposing the grinding surface between which coffee beans are ground;
positioning the grinding surface and the opposing structure to define a gap;
providing an adjuster operatively coupled to the bean grinding assembly for controllably adjusting a dimension of the gap; and
maintaining the gap using the adjuster.

22. The method of adjusting a grinder as in claim 21, including the steps of:
providing a pair of grinding burrs for grinding coffee beans therebetween;
providing an engaging structure on at least one of the burrs;
providing the adjuster with a controllable drive engaged with engaging structure on the burr; and
controllably moving the burr with the drive.

23. The method of adjusting a grinder as in claim 21, including the steps of:
providing a controllable adjustment drive;
providing an adjuster body contacting one of the burrs; and
controllably moving the adjuster body with the adjustment drive for moving at least one of the burrs contacting the adjuster body.

24. The method of adjusting a grinder as in claim 21, including the steps of:
monitoring gap between burrs; and
operating the adjuster to controllably adjust the gap between the burrs.